

REMARKS

Claim 1 has been amended to incorporate in the claim the specification language around what is meant by the term “amorphous”. Support may be found at page 6, lines 4-5 of the specification. See also the enclosed portion of Chung, Frank H. and Deane K. Smith, INDUSTRIAL APPLICATIONS OF X-RAY DIFFRACTION, Marcel Dekker, Inc; (2000) pp 495-6. This publication describes a conventional method, well-known to those of ordinary skill in the art, used to determine whether a polymer exhibits long-term order by ascertaining the presence or absence of sharp peaks in the X-ray diffraction pattern. New claim 35 omits reference to imides as acceptable backbone monomers. Depending on the location and type of chromophores employed, imides may or may not be effective in layer B.

Claims 20 and 21 are allowed.

Allowable claim 33 has been rewritten in independent form.

Claim 34 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. While Applicants do not agree with the Examiner’s position, Claims 34 has been canceled to further prosecution.

Concluding periods were added to claims 7, 21, and 23.

Claims 1-19, 22-26, and 34 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ezzell et al. (US 5,750,641).

According to the Examiner:

Ezzell teaches a multilayer compensator (angularity enhancement construction) comprising layer A of Applicant, which is an optically transparent and optically isotropic first layer (substrate) comprising polymeric material (column 2, lines 35-40). Ezzell teaches that the layer comprising polymeric material has zero birefringence in all directions, including out-of-plane (optically isotropic), which is within the claimed out-of-plane birefringence range of not more negative than -0.01. Merriam-Webster’s Collegiate Dictionary, 10th edition, defines the term “isotropic” as exhibiting properties with the same values when measured along axes in all directions, and “birefringence” as the refraction of light in an anisotropic material, wherein the term “anisotropic” is defined as exhibiting properties with different values when measured in different directions.

The substrate of Ezzell, which meets the requirements of layer A of Applicant, has at least one contiguous second layer (on at least one surface thereof) of polyimide having an out-of-plane birefringence in the range of -0.001 to -0.2 (column 3, lines 30-40), which overlaps the claimed range of more negative than -0.01. Polyimide is inherently an amorphous polymeric material as defined by Applicant's specification (page 5, lines 20-30). Hence the contiguous second layer of amorphous polyimide meets the requirements of layer B of Applicant. Ezzell teaches that the multilayer compensator (angularity enhancement layers) has an off-normal retardation of at least about 50 nm (column 5, lines 50-60), provided by the second polyimide layer, the underlying first layer being optically isotropic (column 2, lines 35-40).

(Emphasis supplied)

Applicants respectfully disagree that Applicants specification discloses that polyimides are inherently an amorphous polymeric material. Page 5, lines 20-30, of the specification does not appear to support this assertion. "Amorphous" polymers are described at page 6, line 4 of the specification as polymers that lack long-range order when using X-ray diffraction. Ezzell notes at col. 3/ line 30 that his polymer exhibits "in-plane orientation" which is the same descriptor as used in U.S. 5,344,916 (Harris et al.), cited into the record by Applicants. (See the Abstract and col. 4/ line 28 of Harris et al..) The enclosed Declaration of James F. Elman demonstrates that polyimides meeting the requirements of Ezzell are not, in fact, amorphous and in particular demonstrates that such imides with a chromophore off of the backbone, such as the fluorene group in Ezzell's polymer, are not amorphous.

The Examiner states further:

Ezzell teaches that it is understood that retardation values are actually negative numbers although we refer to values for retardation in absolute numbers (column 5, lines 50-60). Therefore although Ezzell fails to specify the combination of an overall in-plane retardation (R_{in}) of the multilayer compensator of greater than 20 nm and an overall out-of-plane retardation (R_{th}) of the multilayer compensator of greater than -20 nm, because Ezzell teaches that the multilayer compensator (angularity enhancement layers) has an off-normal retardation of at least about 50 nm, and that it is understood that retardation values are actually negative numbers although we refer to values for retardation in absolute numbers, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have provided for a combination of an overall in-plane retardation (R_{in}) of the multilayer compensator of greater than 20 nm and an overall out-of-plane retardation (R_{th}) of the multilayer compensator of greater

than -20 nm, in order to obtain the desired overall retardation of the multilayer compensator.

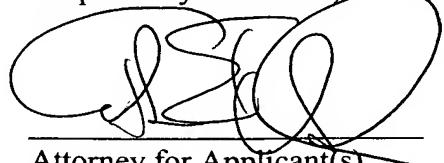
(Emphasis supplied)

Regarding the "out-of-plane" retardation, it is noted first of all that the "Off-normal" retardation of Ezzell is not equivalent to an "Out-of-Plane" retardation. The "Off-Normal" term in Ezzell appears to have an angular dependence according to Formula VI at col. 5/ln 39. There is no basis for inferring that the "Off-Normal" 50nm value recited would be equivalent to an "Out-of-Plane" retardation of greater than 20nm as the instant claims are limited.

Regarding the "In-Plane" retardation, it is noted by Ezzell at col. 12/ln 38 that all of the examples had $nx = ny$ and so were uniaxial. Even if Ezzell contemplated possible "In-Plane" retardation, it cannot be said to have been essential, especially at a value of at least 20nm since it was omitted from all examples.

It is believed that the present amendment was the result of the Examiner's new grounds of rejection and should be entered. In view of the foregoing amendments and remarks, the Examiner is respectfully requested to withdraw the outstanding rejections and to pass the subject application to Allowance.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.

Enclosures: Declaration of James F. Elman
Industrial Applications article